Appendix F
Economic Analysis Report

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11400 SOUTH

Environmental Impact Statement

ECONOMIC ANALYSIS REPORT

October 2004

ECONOMIC DEVELOPMENT

Economic Analysis Methodology

Establish Base Data

Wikstrom Economic and Planning Consultants (WEPC) reviewed existing economic development policies of each community in the study area (South Jordan, Riverton, Sandy and Draper) to establish existing goals and objectives for economic development. Base economic information such as employment, wages, income, sales, etc., were collected for the period 1990 – 2004 wherever possible. WEPC interviewed the economic development departments of each community to identify current and future development activities in each community and the anticipated timing of each development. The municipal budgets for each community were then analyzed to determine the role of future development in creating and meeting City fiscal needs.

WEPC also reviewed the right of way (ROW) acquisition plans for each alternative to establish direct construction impacts of each portion of an alternative's proposed improvements (e.g., 10600 South between I-15 and Redwood Road could be considered one "section" of proposed improvements under Alternative 4). WEPC then met with individual property owners to establish direct impacts related to construction (takings, construction-period business losses, etc.).

Impacts Analysis of Alternatives Forwarded for Consideration

Development scenarios have been established for each section of proposed roadway improvements under the various alternatives. The economic and fiscal impacts for each will be expressed in terms of employment, sales, property values and tax revenues. The impacts are expressed in current dollars, but the timing of the impacts will be determined by the proposed phasing of improvements within each alternative.

In addition, an input-output model was used to assess the induced impacts related to the outside investment related to each of the alternatives.

Affected Environment

The study area contains the communities of Sandy, South Jordan, Riverton and Draper. All lie in the southern end of the Salt Lake Valley and in the heart of the Wasatch Front – the population center and economic driver of the Utah economy. The communities can be characterized as fast-growing, suburban cities. Of the four, Sandy City is the most maturely developed. As such, it has firmly established regional retail and employment centers within its boundaries. The other three communities are in the midst of aggressive growth periods that include new housing, retail and employment centers. In the past, these communities served as bedroom communities to Salt Lake City; in recent years, the development has assumed more of an "edge city" character – with suburban employment and retail centers often out-performing the more established Salt Lake City CBD.

The term "Economic Development" can be defined a number of ways. In this analysis, the term refers to activities that occur within or are initiated by a local community that will increase the revenues of that community. Local government revenues are generally comprised of property taxes, sales tax, franchise tax (utilities), fees and licenses/permits. The types of activities that impact each are described below:

Revenue Type	***Economic Development Activities that Increase Revenues***
Property tax	*New development, redevelopment*
Sales tax	*Increased number of retail outlets; increased sales at existing outlets*
Franchise tax	*New development or redevelopment that results in increased numbers of businesses and households or increased utility usage*
Fees	*Should be revenue neutral as state law requires that fees are directly offset by costs*
Licenses/Permits	*Should be revenue neutral as state law requires that fees are directly offset by costs*

This section discusses the current and historical data for economic factors that will be applied in the impacts analysis for each alternative under consideration. It is the baseline against which alternative transportation scenarios will be evaluated.

Table 1– Population and Median Household Income

	Total Population	Median Household Income (1999 Dollars)
Study Area	28,967	$66,517
State of Utah	2,233,169	$45,726
Salt Lake County	898,387	$48,373
Draper City	25,220	$72,341
Riverton City	25,011	$63,980
Sandy City	88,418	$66,458
South Jordan City	29,437	$75,433

Source: U.S. Census Bureau, Census 2000

Municipal Revenues

Municipal governments typically provide the following services (either directly or through contracts with other agencies): police, fire, planning and zoning, public works (roadways and utilities), parks and recreation, garbage pick-up, and other general government services. The revenue sources are generally limited to those discussed above. Municipalities have experienced an increasing reliance on sales tax revenues since the passage of the "Truth in Taxation Act" in 1985 that forbids increased property tax revenues on the basis of inflation or appreciation – effectively capping property tax revenues for mature communities at the time of the act, absent demonstrable new growth. Property tax as a percentage of local government revenues has declined from about 40 percent in 1968 to roughly 16 percent in 1999. Correspondingly, sales tax revenues have increased as a percentage of total revenues from 19 percent to 32 percent. Therefore, while economic development initiatives aimed at revenue sources other than sales taxes are still undertaken (it takes rooftops to support retail), the biggest bang for the economic development buck is found in retail development that yields both property and sales tax revenues.

As Table 1 shows, Sandy City serves approximately 88,000 residents; South Jordan has a population of roughly 29,000 while Draper and Riverton each contain about 25,000 people. Therefore, it is not surprising that Sandy City's budget of $44 million is three to four times higher than the other cities' budgets. (South Jordan's budget is about $15 million, Riverton's is $10 million and Draper's is roughly $12 million.) Table 2 shows the role of sales tax in each community's budget.

Table 2-Role of sales tax in communities' budgets

Sales Tax as % Total Revenues, FY 2002	
Sandy	33.38%
South Jordan	19.44%
Riverton	20.64%
Draper	29.00%

Building Permits

Residential Development

Building permit data from each of the communities provides a picture of historical residential development in the southern portion of the Salt Lake Valley. Table 3 indicates that in the late 1980s/early 1990s, most residential activity occurred in Sandy City. In later years, development was generally evenly split among the communities or slightly dominated by Draper City.

Table 3-Building permit data

	Draper DU's	Sandy DU's	Riverton DU's	South Jordan DU's	Total	Draper DU's as % Total	Sandy DU's as % Total	Riverton DU's as % Total	South Jordan DU's as % Total
1988	15	488	59	125	687	2%	71%	9%	18%
1989	27	543	47	130	747	4%	73%	6%	17%
1990	34	565	70	211	880	4%	64%	8%	24%
1991	99	767	87	337	1,290	8%	59%	7%	26%
1992	128	883	257	531	1,799	7%	49%	14%	30%
1993	258	940	421	644	2,263	11%	42%	19%	28%
1994	458	619	464	581	2,122	22%	29%	22%	27%
1995	714	727	511	486	2,438	29%	30%	21%	20%
1996	1,105	244	472	670	2,491	44%	10%	19%	27%
1997	843	406	310	471	2,030	42%	20%	15%	23%
1998	825	828	425	440	2,518	33%	33%	17%	17%
1999	628	193	377	379	1,577	40%	12%	24%	24%
2000	438	383	271	311	1,403	31%	27%	19%	22%
2001	903	180	649	374	2,106	43%	9%	31%	18%
2002	526	262	372	605	1,765	30%	15%	21%	34%
2003	794	549	315	678	2,336	34%	24%	13%	29%

Nonresidential Construction

Nonresidential construction skyrocketed after the early 1990s in the four communities, increasing from under $10 million in 1988-1989 to $1761 million in 1998. Most nonresidential construction activity occurred in Sandy and Draper.

Table 4-nonresidential construction

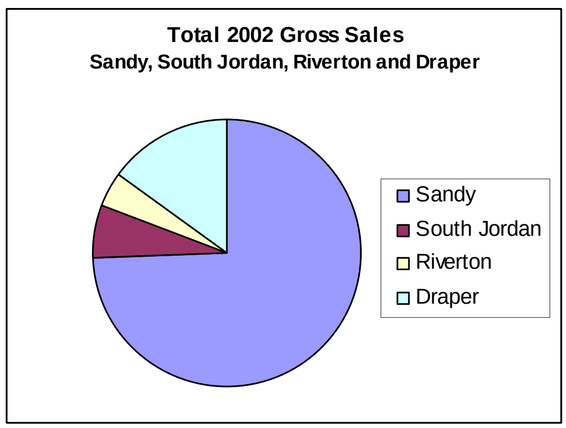
	Draper	Sandy	Riverton	South Jordan	**Total**	Draper as % Total	Sandy as % Total	Riverton as % Total	South Jordan as % Total
1988	916,900	3,045,800	1,679,800	1,195,600	6,838,100	13%	45%	25%	17%
1989	742,300	6,968,900	275,200	674,100	8,660,500	9%	80%	3%	8%
1990	3,337,800	13,481,300	254,300	384,900	17,458,300	19%	77%	1%	2%
1991	2,033,700	10,864,200	202,700	7,028,700	20,129,300	10%	54%	1%	35%
1992	8,668,000	13,629,100	567,400	3,826,000	26,690,500	32%	51%	2%	14%
1993	4,201,700	14,259,300	766,100	10,953,000	30,180,100	14%	47%	3%	36%
1994	10,155,833	38,785,237	3,848,789	6,184,882	58,974,741	17%	66%	7%	10%
1995	16,972,800	26,984,200	3,591,500	4,460,000	52,008,500	33%	52%	7%	9%
1996	31,022,900	54,580,000	3,900,400	2,977,200	92,480,500	34%	59%	4%	3%
1997	79,484,400	30,984,800	5,062,000	16,075,900	131,607,100	60%	24%	4%	12%
1998	19,317,600	136,793,700	4,619,700	15,514,600	176,245,600	11%	78%	3%	9%
1999	19,248,300	22,816,600	46,854,800	26,802,800	115,722,500	17%	20%	40%	23%
2000	27,964,600	84,643,600	10,989,200	24,225,700	147,823,100	19%	57%	7%	16%
2001	14,924,200	32,432,600	5,029,400	27,908,200	80,294,400	19%	40%	6%	35%
2002	18,337,700	21,970,100	2,470,400	16,657,700	59,435,900	31%	37%	4%	28%
2003	6,793,600	22,608,400	24,802,200	16,077,600	70,281,800	10%	32%	35%	23%

Gross Sales

Gross retail sales in the four communities have grown at an average annual rate of 7.88% since 1995. This growth has not been at a constant nor consistent rate for each of the communities over the seven year timeframe. The following Table summarizes the average annual growth rates for the periods 1988 – 2002 and 1995 through 2002 for each of the communities under study. Overall, South Jordan has experienced the highest growth rate in retail sales over the past seven years.

Table 5-Growth of gross retail sales

Riverton	1993-2002	1995-2002
	9.28%	**8.09%**
Draper	1995-2002	1995-2002
	10.51%	**10.51%**
South Jordan	1995-2002	1995-2002
	11.80%	**11.80%**
Sandy	1988-2002	1995-2002
	10.44%	**7.13%**
Total		1995-2002
		7.88%



Growth in sales, however, is only part of the picture. Total 2002 sales in Sandy City were nearly three times that of sales in all other three communities combined. Sandy City contains South Town Mall, one of four regional malls located in the Salt Lake Valley. Sandy City has also actively recruited automobile dealerships and automotive sales have increased from 9 percent of total sales in Sandy in 1994 to 20 percent of total sales in 2002. In fact, automotive sales in Sandy alone are greater than total sales in any of the other three communities in the study area. Retail auto sales were also a driving force in South Jordan's high growth rate. Retail auto sales in South Jordan contributed to nearly 23% of the total gross sales of 2002. However, as late as 2001, retail auto sales comprised less than 3% of total gross sales in South Jordan. Manufacturing contributes 9% of total sales in Draper, more than any other community. Retail food sales are the largest category in each of the communities; however, none rely as heavily on food sales as Riverton. Over 40% of total retail sales in Riverton occur in food stores.

Each community was contacted to identify pending and future development within their borders. These maps are included as:

Land Use and Taxable Value

According to information from the Salt lake County Assessor's Office, the four communities range in size from 7,145 acres in Riverton to 13,608 acres in Draper. Sandy is the most developed community with approximately 65 percent of the total land area in private development (residential, commercial or industrial). With a fair amount of Draper lying within the Utah State Prison grounds, Draper has the lowest proportion of privately developed ground (30 percent). South Jordan and Riverton have 33 percent and 46 percent of privately developed land, respectively.

Table 6-Acres by Taxing Designation of Land Use (2004)

	Draper	% Total in City	Sandy	% Total in City	Riverton	% Total in City	South Jordan	% Total in City	Total (4 Cities)
Residential	3,191	23%	6,348	52%	3,158	44%	3,935	30%	16,631
Commercial	419	3%	1,343	11%	140	2%	311	2%	2,213
Industrial	473	3%	212	2%	14	0%	23	0%	722
Agricultural	1,175	9%	149	1%	1,255	18%	5,408	42%	7,987
Government and Non-Profit	5,223	38%	2,720	22%	1,129	16%	1,816	14%	10,889
Vacant	3,127	23%	1,474	12%	1,448	20%	1,490	11%	7,539
Total	13,608	100%	12,246	100%	7,145	100%	12,983	100%	45,981

Source: Salt Lake County Assessors Office

Taxable value is based on 100 percent of market value for nonresidential uses, 55 percent of market value for primary residences and often a fraction of market value for land in active agricultural production. Therefore, property taxes received from nonresidential development is much greater (by 45 percent, dollar for dollar) than other property types. Comparing the proportion of land in Sandy City that is nonresidential (11 percent) with the proportion of taxable value that is nonresidential (23 percent) illustrates this concept.

Table 7-2004 Taxable Value by Land Use Type

	Draper	% Total in City	Sandy	% Total in City	Riverton	% Total in City	South Jordan	% Total in City	Total (4 Cities)
Residential	1,117,772,719	64%	2,802,960,360	71%	777,777,189	83%	1,083,741,882	75%	5,782,252,150
Commercial	323,438,180	18%	912,354,610	23%	89,442,447	10%	196,764,957	14%	1,522,000,194
Industrial	82,448,433	5%	56,674,132	1%	4,597,063	0%	14,247,388	1%	157,967,016
Agricultural	647,782	0%	139,990	0%	963,990	0%	10,528,930	1%	12,280,692
Government and Non-Profit	233,430	0%	3,652,385	0%	932,110	0%	92,060	0%	4,909,985
Vacant	225,699,451	13%	158,811,566	4%	65,213,189	7%	138,351,829	10%	588,076,035
Total	1,750,239,995	100%	3,934,593,043	100%	938,925,988	100%	1,443,727,046	100%	8,067,486,072

Source: Salt Lake County Assessors Office

Pending and Future Development

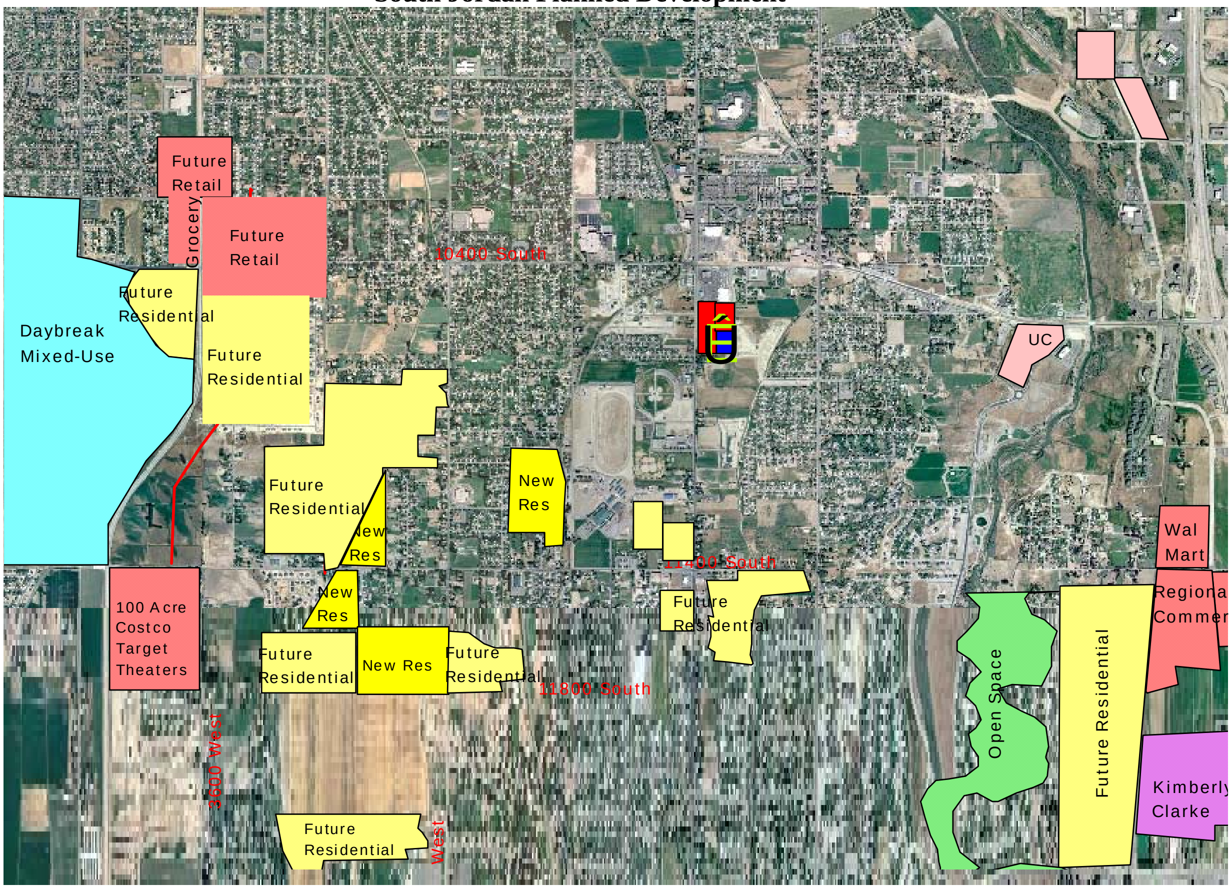
Based on interviews with local economic development officials, pending and future developments were outlined. Many of the city's General Plans anticipate a freeway interchange at 11400 South, and so the land use projected for the area surrounding the potential intersection is regional-commercial in nature. Each of the city's proposed developments are highlighted in and discussed separately below.

South Jordan Planned Development

The area of South Jordan near the 10600 S. I-15 interchange is planned mostly for office use, much of which is currently built or planned for near-term construction. The city has planned regional commercial uses at 11400 South and I-15. In fact, the property at Lone Peak Parkway and 11400 South is currently optioned to Wal-Mart for a supercenter (food and nonfood items).

Most of South Jordan's future development will along or west of the Bangerter Hwy. The largest development in South Jordan (and in the State of Utah) is Kennecott's Daybreak master planned community. Daybreak will include 13,667 units of housing (all types), 2.5 million SF of retail space, 5 million SF of office space and 1.5 million SF of industrial space. In addition to the Daybreak development, South Jordan is planning a major commercial development at 11800 South and Bangerter. Current plans include a multi-screen theater, Costco and Target. Additional commercial development is planned at 10400 South and Bangerter Hwy.

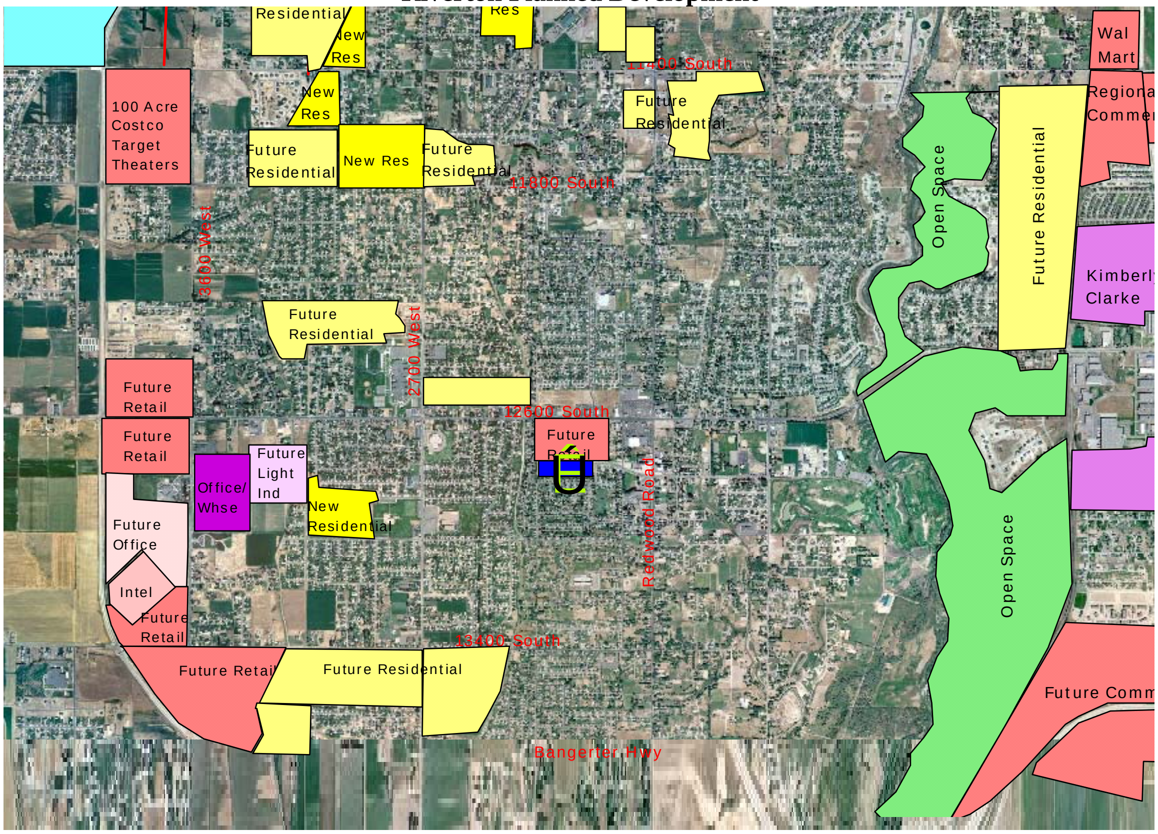
South Jordan Planned Development



Riverton City Planned Development

Riverton does not have frontage along I-15 and most of its commercial development has occurred along 12300/12600 South near Redwood Road. The City is focusing its economic development initiatives along the Bangerter Hwy corridor between 12300 South and 13400 South with several hundred acres available for retail, office or institutional use. Commercial development of roughly 100 acres is anticipated in the next few years.

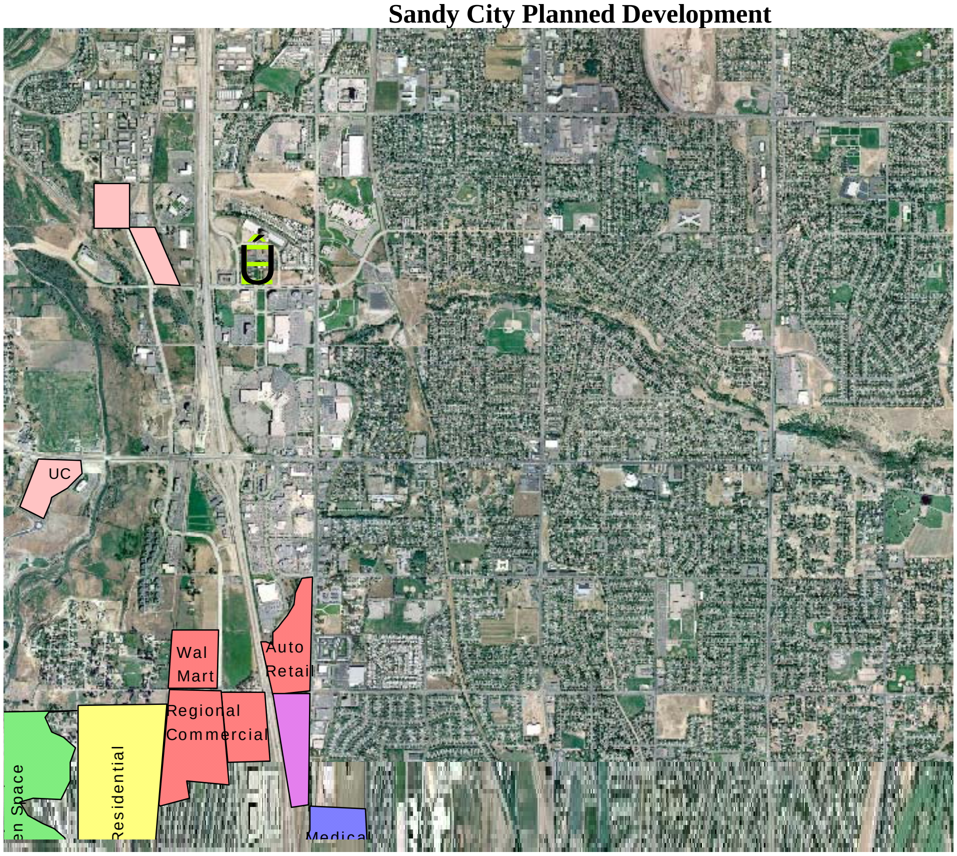
Riverton Planned Development



Sandy City Planned Development

Sandy City is fairly built-out. Its plans have provided for regional commercial on its portion of the 114oo South and I-15 intersection (northeast corner), possibly a continuation of its automall.

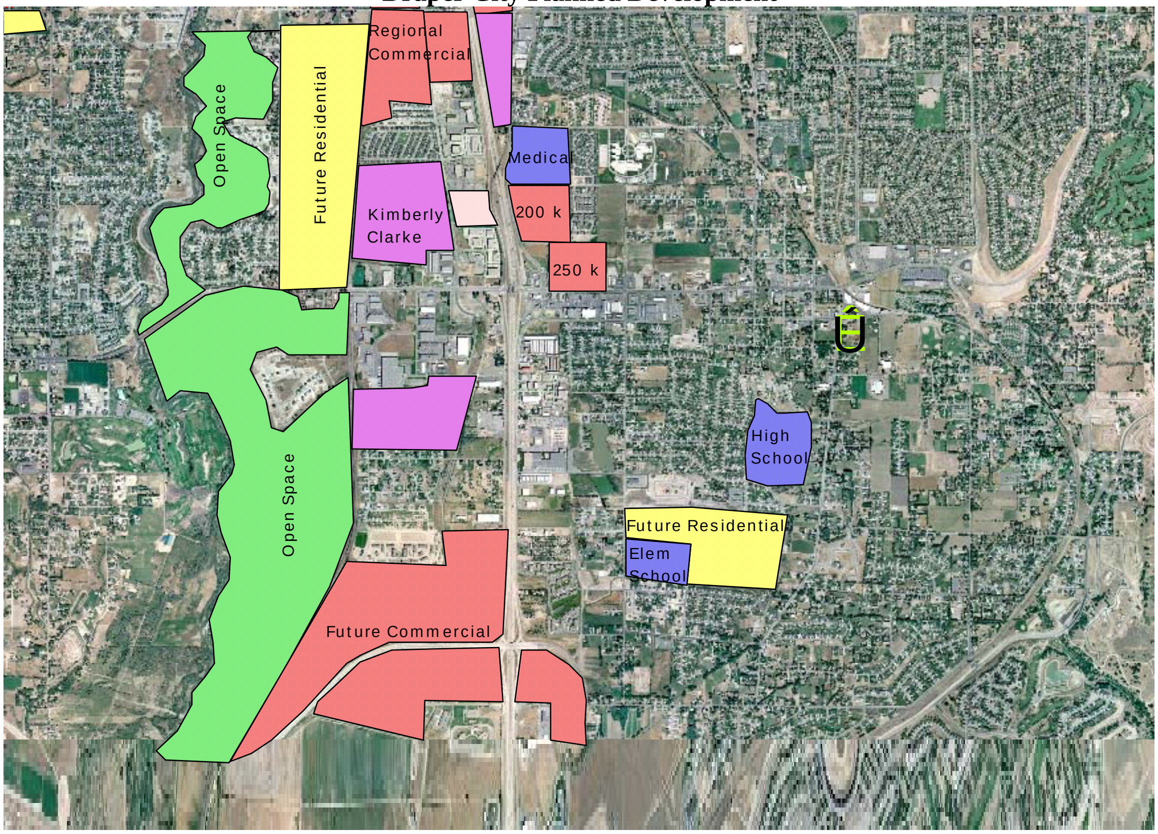
Sandy City Planned Development



Draper City Planned Development

Draper City has experienced rapid development of its 12300 South corridor near I-15. There is about 450,000 SF of retail space under construction or planned for construction in the near term. The property west of I-15 is characterized as mostly light industrial uses with some residential development. The city plans regional commercial uses at 11400 South in anticipation of the freeway interchange identified in Alternative 4. The city has actively preserved open space along the Jordan River, purchasing large tracts of land for passive and active open space uses. Large tracts of land remain slated for future commercial use at the I-15/Bangerter interchange.

Draper City Planned Development



Office Market Analysis

Table 8-Office Market Analysis

Colliers CRG 2003 Year End				
	2003 Vacancy	2003 Absorption	2002 Vacancy	2002 Absorption
Southeast	9.60%	195,108	16.57%	-94,080
Southwest	13.99%	43,876	29.51%	105,800
Total SL Market Area	16.49%	538,595	17.74%	237,492

Retail Market Analysis

The impact of the various alternatives on retail development was raised by local economic development officials as part of the scoping and additional economic development research completed as part of this EIS. Therefore, this section attempts to address these questions and concerns in two ways: market data (secondary) and a buying power analysis within market trade zones at various points within the study area.

Market Analysis

The retail market is considered by many real estate professionals to be overbuilt. Rapid expansion of big box retail throughout the market area has left numerous community and neighborhood centers with empty stores – particularly with the exodus from the market of Food 4 Less, Kmart and Home Base. The market data cited below seems to exclude these properties in vacancy information – assuming that these properties are not being actively marketed. Competition among communities to attract the next iteration of retail through subsidies has also contributed to the oversupply. However, there is a rapid expansion of large retailers, particularly in high-growth areas.

The southern third of Salt Lake County contains nearly half of the total retail space in the Salt Lake Valley. Almost 158,000 SF of retail space was absorbed in the southern portion of the valley (that contains the study area). While this number is not large (representing about one big-box retailer), it contrasts favorably with the negative absorption experienced in the northeast/central east areas.

Table 9-Commercial Market Analysis

	Southeast	Southwest	Total South	Total Market	South-east as % Total Market	South-west as % Total Market	South as % Total market
2003 Absorbed SF	16,492	141,021	157,513	78,563	21%	180%	200%
Total SF (Inc. Malls)	6,441,277	3,202,841	9,644,118	23,782,045	27%	13%	41%
Available SF (Inc. Malls)	272,692	93,417	366,109	1,744,238	16%	5%	21%
Total SF (Exc. Malls)	5,486,063	3,202,841	8,688,904	18,813,751	29%	17%	46%
Available SF (Exc. Malls)	252,692	93,417	346,109	1,210,168	21%	8%	29%
2003 Rents	15.36	14.73		14.53			
Note: Total market absorption includes –183,253 in other market areas							

Vacancies have increased over the past two years in the Salt Lake market area. By contrast, vacancies in the study area have declined and are substantially below the market-wide levels. A review of the past six years indicates that, with few exceptions, retail space in the study area has consistently had lower vacancy rates that the market as a whole.

Table 10-Commercial Vacancy Rates

	2003	2002	2001	2000	1999	1998
Southeast	4.23%	4.49%	5.87%	4.79%	4.79%	4.75%
Southwest	2.92%	4.64%	5.19%	3.96%	3.96%	4.11%
Valley	7.33%	7.00%	5.58%	4.93%	4.93%	4.30%

The market data suggest that the retail market in the study area is fairly strong with low vacancies and a positive absorption.

Another way of looking at the retail potential is to evaluate the square feet of retail space per capita in a given area. Assuming that the southern market areas include the four communities under evaluation (Sandy, Draper, South Jordan and Riverton) with a combined population of 168,086 in 2000, there is roughly 57 SF per person currently extant. Excluding regional mall space, this figure is reduced to 51 SF per person. The difference – about 6 SF/person – is assumed to be the amount of regional retail per capita.

This figure is very high, compared to other western states and the nation. On average, there is about 16 SF of retail space for each person in the United States. The Utah average is just over 13 SF per person.

Table 11- Retail GLA Per Capita

	Total Centers	Neighborhood Centers	Community Centers	Regional Centers	Super Regional Centers	1999 Est State Population	GLA per capita	Regional/Super Reg per capita
Utah	28,068,848	4,276,733	10,658,170	6,326,620	6,807,325	2,118,300	13.25	6.20
California	538,365,584	111,673,572	200,422,937	118,780,465	107,488,610	33,867,600	15.90	6.68
Total West	976,187,999	204,249,080	369,694,576	215,408,522	186,835,821	62,028,900	15.74	6.48
Total West less CA	437,822,415	92,575,508	169,271,639	96,628,057	79,347,211	28,161,300	15.55	6.25
Total USA	4,394,303,502	930,509,133	1,719,355,716	897,857,225	846,581,428	273,537,800	16.06	6.38
Source: National Research Bureau, *Shopping Center Directory 2000,* 40th ed., Table 2.								

As a comparison for the regional per capita retail space, WEPC identified "major" retail centers in each of the counties along the Wasatch Front, compiled the square footage of these centers based on information provided by the National Research Bureau, and have then calculated a ratio of regional mall square footage to population. The Wasatch Front "average" of regional retail square feet per capita is roughly 4.9 SF. Based on information provided by the National Research Bureau, Utah has roughly 6.2 square feet of regional and super regional[1] retail space per capita, compared to an average of 6.25 square feet in the Western states (not including California). This analysis indicates that Utah is neither under- nor over-retailed in terms of regional and super regional centers.

Buying Power Analysis

Buying power analysis is a means of assessing the viability of retail at various locations. We have not attempted to quantify existing inventory beyond the figures discussed above.

On average, Utah residents spend the following amounts annually for retail goods and services.

Table 12-Utah Spending Per Capita By Retail Sector

Industry	Utah Spending per Capita	Industry	Utah Spending per Capita
Lumber & other bldg mtrls	$460.51	Jewelry stores	$38.19
Paint glass & wallpaper	$36.86	Hobby, toy & game	$59.41
Hardware stores	$114.92	Camera & photographic	$10.61
Nurseries & garden stores	$21.65	Gift, novelty & souvenirs	$61.09
Mobile home dealers	$7.53	Luggage & leather stores	$5.25
		Sewing & needlework	$22.58
Department stores	$1,471.82	Nonstore retailers	$100.62
Variety stores	$57.32	Fuel dealers	$11.48
Misc. gen merchandise	$24.44	Florists	$16.89
		Tobacco stores	$10.51
Grocery stores	$1,099.24	News dealers & news stands	$2.36
Other food stores	$60.60	Optical goods	$16.41
Convenience stores	$222.94	Miscellaneous retail	$226.51
New & Used car dealers	$1,052.48	Hotels & lodging	$290.93
Used (only) car dealers	$199.21		
Auto & home supply	$152.03	Laundry cleaning & garment	$42.02
Gasoline service stations	$70.17	Photographic studios	$18.31
Boat dealers	$27.34	Beauty shops	$10.60
Recreation & utility trailers	$40.40	Barber shops	$0.10
Motorcycle dealers	$51.01	Shoe repair	$0.88
Automotive dealers	$19.56	Funeral service & crematories	$10.89
		Misc. personal services	$8.56
Men's & boy's clothing	$16.74		
Women's clothing	$35.62	Advertising	$8.64
Women's accessory & spec.	$25.37	Credit reporting	$0.21
Childrens' & infants' wear	$12.16	Mailing, reproduction, steno	$31.29
Family clothing	$202.53	Service to buildings	$2.15
Shoe stores	$42.78	Equipment rental & leasing	$171.32

[1] Regional retail is defined by NRB as a center built around a full-line department store (of at least 100,000 sq. ft.) and ranging between 300,000 to 1,000,000 SF. A super regional center is built around three or more major department stores and generally ranges in size from 750,000 to 1,000,000 square feet

Table 12-Utah Spending Per Capita By Retail Sector

Industry	Utah Spending per Capita	Industry	Utah Spending per Capita
Misc. Apparel & accessory	$23.91	Personnel supply services	$2.12
		Computer & data processing	$119.78
Furniture & home furnishings	$303.66	Misc. business services	$98.06
Household appliances	$36.37		
Radio, TV & electronic	$85.29	Automotive rentals	$182.28
Computer & software stores	$108.25	Automotive parking	$0.27
Record & prerecorded tapes	$34.67	Automotive repair shops	$228.47
Musical instrument stores	$21.28	Automotive service Exc. Repair	$33.12
		Electrical repair shops	$20.48
Fast food eating places	$325.31	Watch, clock & jewelry repair	$1.81
1977 code eating places	$29.98	Re-upholstery & furniture repair	$2.37
1977 code drinking places	$1.37	Misc. repair shops	$53.95
Family restaurant w/o liquor	$302.74		
All other eating places w/o liquor	$54.39	Motion picture production & distribution	$3.91
Theme restaurant with liquor	$116.29	Motion picture theaters	$50.50
White table cloth with liquor	$6.23	Video tape rental	$32.85
Private clubs	$26.35	Dance studios	$0.82
Beer retailer/tavern	$6.52	Producers, orchestras, entertainers	$3.48
		Bowling centers	$8.34
Drug stores & proprietary stores	$28.34	Commercial sports	$32.05
Liquor stores	$56.98	Ski resorts	$71.20
Used merchandise	$14.63	Misc. amusement	$112.61
Sporting goods & bicycles	$135.35		
Book stores	$48.18		
Stationery stores	$50.95	**Total**	**$9,579.54**

Average per capita spending for retail goods and services is $9,580.[2] With a year 2000 population of 168,086 persons, the estimated retail buying power in 2000 was $1,610,263,880 ($9,580 * 168,086). As a basis for comparison, retail sales for the four communities in 2002 were $510,621,479 for those same retail goods and services categories listed above. These numbers give the impression that there is roughly $1 billion of "leakage" (i.e.; sales leaving the area).

The estimated buying power of $1.6 billion ($1.3 billion excluding automobile sales) also suggests that the four-community area could support between 6.7 million and 8 million SF of retail space.[3] Note that the total inventory of retail space is 9.6 million SF. This, coupled with the market data discussed above, suggests that the retail drawing power of the area exceeds the reach of these four communities.

The Wasatch Front Regional Council projects combined 2030 population for the four communities at 332,000 an increase of about 164,000 over the next 26 years. At that time, the new growth could support an additional 7.8 million SF of retail space.

Trade Radius Analysis

An issue raised in scoping is that the potential retail development at 11400 South and I-15 would suppress retail opportunities in other communities, namely Draper and Riverton. To address this issue, WEPC has

[2] When motor vehicle sales are excluded, the average retail sales per capita is reduced to $7,968.

[3] Assuming average sales per square foot of $200.

completed an analysis of the relative retail potential of a number of sites within the study area for both 2004 and 2030. The various sites that were identified are: Bangerter Hwy and 3800 West; 11400 South and 1-15; 12300 S. and I-15; 10600 South and I-15; Bangerter Hwy and 11800 South; 12600 S. and Redwood Road; 10400 S. and Redwood Road; and Bangerter Hwy and I-15. These sites were selected because each offers regional access (or the potential for regional access under an alternative scenario).

Table 13-Current and projected population at potential major retail locations

	1-mile radius			3-mile radius		
Location	**2004**	**2030**	**AAGR**	**2004**	**2030**	**AAGR**
10600 South and I-15	5,224	7,160	1.2%	81,649	115,954	1.4%
11400 South and 1-15	7,133	10,421	1.5%	70,308	105,221	1.6%
12300 S. and I-15	3,914	6,393	1.9%	66,888	100,786	1.6%
10400 S. and Redwood Road	7,321	13,296	2.3%	66,738	108,162	1.9%
12600 S. and Redwood Road	12,925	18,496	1.4%	51,663	101,496	2.6%
Bangerter and I-15	4,881	7,519	1.7%	44,484	84,962	2.5%
Bangerter and 11800 South	5,423	15,922	4.2%	41,392	121,023	4.2%
Bangerter and 3800 West	3,612	10,469	4.2%	39,871	107,237	3.9%

The sites are listed in descending order for three-mile radius population in 2004. It is easy to understand why 10600 S. and I-15 so dominates the retail horizon of the southern Salt Lake Valley with the largest trade-area population for community/regional retail. In 2030, the three-mile radius with the largest population base will be that surrounding Bangerter and 11800 South – indicating shifting population to the now undeveloped westernmost lands – although most of the radii population estimates are fairly equal at around 110,000 persons.

The one-mile radius figures provide information about the viability of a neighborhood-scale retail center. Typically, there needs to be about 5,000 to 6,000 persons residing within the smaller trade area to support a grocery store with some small associated retail. The data above indicate that any of the sites could support a neighborhood center (with the western-most locations occurring later).

I. Economic Impacts

A. Introduction

Economic development impacts are discussed in terms of direct impacts, indirect impacts and induced impacts. **Direct impacts** are such things as construction employment, relocations due to road widening and associated rights-of-way acquisitions, disruptions to business or life because of construction activity. **Indirect impacts** are related to new development or business activity that might occur as a result of new or improved access or traffic flow in an area, or conversely a reduction in development or business activity due to impaired access or traffic flow. Indirect impacts are also tracked through related fiscal impacts to local governments. **Induced impacts** are related to increased economic activity in a region related to new investment in that economy by an outside source, in this instance by the federal government in roadway improvements. Induced impacts are estimated using an input-output economic model that estimates employment, income and multiplier effects of this outside investment. Each of these impacts will be addressed in turn.

B. Methodology

The consultants have conducted field research of the study area. The area can be characterized as primarily residential with service retail, industrial and some remaining agricultural land uses. The consultants met with the economic development staff of each city located within the study area (South Jordan, Riverton, Sandy and Draper) and reviewed all existing economic development policies of each to understand existing goals and objectives for economic development. Base economic information such as employment, wages, income, sales, etc., were collected and future development activities identified wherever possible, as well as the anticipated timing of each development. The municipal budgets for each community were analyzed to determine the role of future development in creating and meeting City fiscal needs.

C. Direct Impacts

1. Construction Employment

Construction employment can be estimated from the estimated total project cost of each of the alternatives. Generally, 35 percent of the total construction value is for labor costs. We have assumed that 100 percent of these wages will be paid to Salt Lake County County workers. We further assume that each $1,000 of labor cost translates into roughly 11.6 hours of labor and that 1,880 hours equals one person year of labor. Using these formulae, we estimate total construction employment and costs with each alternative as follows:

Table 1 Estimated Construction Labor and Wages			
Alternative	**Total Project Cost**	**Estimated Labor Wages, Taxes and Benefits**	**Estimated Number of Person Years of Employment**
No Action	0	0	0
Alt 1	208,000,000	72,800,000	450
Alt 3A	167,000,000	58,450,000	361
Alt 4	122,000,000	42,700,000	264
Alt 7	150,000,000	52,500,000	324

2. Construction Disruption

a) Businesses

Potential economic impacts resulting from construction would consist of inconvenience to traveling motorists, restricted access to adjoining properties, reduced sales and/or loss of business, utility disruption, safety, and unsightly appearance of construction activities in the area. These impacts are discussed in the following sections:

Inconvenience to traveling motorists: Many motorists and potential customers of 10600/10400 South and 12300/12600 South (and 11400 South/11000 South under Alternatives 4 and 7) may choose to avoid the construction area due to fears of traffic congestion, the confusion in traffic flow often caused by construction activities and the feeling that businesses may be more difficult to access.

Interviews conducted among 400 South businesses in Salt Lake City suggest that business owners saw a decrease in traffic flow during construction but that traffic levels showed a marked improvement immediately after completion of construction and was at full strength within several months after construction.[1]

Restricted access: Businesses rely on convenient access to attract customers. Alternate routes for accessing businesses are typically inferior and likely confuse customers. Access to and from "mid-block" businesses that are not served by alternate access routes will be restricted. Some entrances will be closed during construction, thus reducing the number of customers that will enter the shopping area. The location of staging areas for construction equipment is also a primary concern of business owners. Staging areas need to be carefully located in order to minimize physical, as well as visual, access to businesses.

Reduced Sales/Loss of Business: Research shows that concerns raised by business owners over potential loss of sales during the construction period are legitimate

[1] W.A. Knowles Company, "A Post University Light Rail Project Review of 400 South Businesses," August 12, 2003, page 8

with studies suggesting that sales may decline from 15 to 30 percent, depending on the nature of the business, the length of time of construction, the length of time that the business has been in operation, the actual location of the business, alternate access routes to the business, etc. For example, when San Jose Blvd., home to hundreds of businesses in Jacksonville, Florida was widened to six lanes, business owners estimated that sales decreased by 15 to 30 percent per day.[2] Generally, most businesses experience at least a ten percent reduction, while some have reported reductions of as high as 60 percent.[3]

In a report recently completed for UTA (August 2003) detailing the impacts of the 4th South light rail construction project, most business owners felt that sales declined by 30 percent or more during the time when the "four-block major construction period" was in front of their businesses. However, sales declines over the 16-month construction period were a more modest 7 percent.[4]

Decreased sales during construction are an especially large concern for businesses that rely heavily on "walk-in traffic" as many motorists will avoid the area during the construction period. Research suggests that "destination businesses" with a high proportion of repeat customers will be less impacted than those businesses that rely heavily on walk-in customers. Impacts will be most severe for smaller "mom-and-pop" businesses without deep pockets and the staying power of larger chains.

Due to the projected loss of sales to businesses in the area during construction there will be an accompanying loss of sales tax revenues generated by the businesses on 10600/10400 South and 12300/12600 South. We have estimated that if sales *on* 10600/10400 South and 12300/12600 South decline between 15 percent and 30 percent for a *6-month period*,[5] this will mean a decrease in sales on 12300/12600 South of.between $3.9 million and $7.7 million with associated loss in sales tax revenues to Riverton City of between $39,000 and $77,000[6] and However, many of these "lost" sales may be made up elsewhere within the study area, as customers seek out more convenient places to shop, close to home, yet away from construction activities. Therefore, we feel that the actual loss in sales tax revenues to the cities may be less than that calculated above.

Utility Disruptions: In business interviews conducted as part of the Riverdale Road EIS, business owners expressed concern that water and possibly other utilities will

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[2] The Florida Times-Union, "State's Effort Makes Jacksonville, Fla., Street Expansion a Model Project," November 27, 2000.

[3] The Arizona Daily Star reported that the Family Dollar Store lost 30-40 percent and Cigarettes Cheaper lost 60 percent of their sales during the construction of the widened intersection of South Wilmot Road and East 22nd Street in Tucson. The Arizona Daily Star, "Repaving is Coming to 22nd, Wilmot," May 24, 2003.

[4] W.A. Knowles Company, "A Post University Light Rail Project Review of 400 South Businesses," August 12, 2003, page 6.

[5] The project is expected to take roughly two construction seasons for any "leg" of the project, with a leg being defined as 12300/12600 South or 10400/10600 South, for example. No single business would experience disruption for a period longer than six months.

[6] South Jordan City was unable to provide figures for 10400/10600 South.

be shut off for some portion of the construction period, thus forcing some businesses to temporarily shut down. While it is not likely that this will happen, businesses are dependent on utility services, such as electricity, in order to run computers, ring up sales, cook food, etc., and without electricity are generally unable to function.

Safety: Drivers may make increased use of parking lots as alternative thoroughfares. With the limited visibility of parking lots, this creates safety concerns and increases the potential for economic damage to vehicles and other property.

The construction activities would also disrupt sidewalks and open up large excavations. Construction materials and equipment would be located within the construction zone within easy access of individuals that fail to stay out of the construction area. Heavy construction equipment would be present and would intermix with regular vehicular traffic. Traffic control devices and construction activities would reduce the visibility for the traveling public and could create some driver confusion.

In terms of positive impacts, the construction activity will generate expenditures by construction employees in the local area for items such as fast food, gasoline and other convenience purchases, and possibly the sale of road construction materials (assuming supplies are available locally). The amount of construction employment is calculated above. The following table shows the average amounts spent in Utah per person for these retail items. We have assumed that workers will make 20 percent of their purchases for these items in the immediate area, and have therefore concluded that the average worker will spend roughly $447 in the local area during a one-year period. Economic impact can be determined by multiplying this average amount by the estimated number of construction workers.

Table 2
Utah Average Sales per Capita

	Utah Average Per Capita Sales	Percent Captured in Local Area	Estimated Amount Spent per Worker
Gasoline and Convenience Stores	$285.59	20%	$57.12
Other Food Stores	$57.96	20%	$11.59
Fast Food	$315.24	20%	$63.05
General Merchandise	$1,350.26	20%	$270.05
Records/Electronics/Computers	$226.68	20%	$45.34
	$2,235.73		**$447.15**

Source: Utah State Tax Commission, U.S. Census Bureau

Table 3 Estimated Construction Worker Spending in Study Area			
Alternative	**Estimated number of man years of employment**	**Estimated Amount Spent per Worker**	**Estimated total local spending by construction workers**
No Action	0	$447.15	$0
Alt 1	450	$447.15	$201,218
Alt 3A	361	$447.15	$161,421
Alt 4	264	$447.15	$118,048
Alt 7	324	$447.15	$144,877

Unsightly appearance: The construction would require the roadway, sidewalk and other improvements be torn up. Construction equipment would be staged near business establishments either overnight or during the day. Materials would be stored near the work area. This would create an unsightly appearance and may discourage customers from the area, thus decreasing sales. This concern is especially evident for businesses that front 10600/10400 South and 12300/12600 South quite closely, where owners worry they will feel right in the middle of the actual road construction.

b) Residents

Generally, the impacts described above impact residents of the area as well as businesses. Of course, there are no loss of revenues unless there are home occupations. In Riverton Jana's Ceramic Mudhouse on 12575 S. Elm Meadow Drive would be the only property affected by the proposed construction . In South Jordan the only affected home occupations would be Wilkerson Electric on 11384 S. 2865 W. and Roy's Mobile Auto Repair on 1465 W. 11400 S.

3. Relocations and Partial Takings

In the analysis, any ROW within 15 feet of a structure is treated as a relocation and any ROW that lies outside of 15 feet is treated as a partial taking with appropriate compensation assumed under each approach. In addition to the compensation issues, there are additional economic considerations surrounding relocations and partial takings such as the impact to the community of the loss (temporary or long-term) of the businesses or resident to the community and the potential quality of life considerations related to the partial takings issues. These are addressed in the sections below.

a) Residential Relocations

In preliminary studies, using preliminary boundaries of transportation improvements, a total of 57 residential properties are possibly relocated by at least one the four build alternatives, 11 of which are relocated under any of the four. These all lie along the 10400/10600 South corridor. There are 22 residential properties that would need to be relocated under three of the four alternatives –

Alternatives 1, 4 and 7. Alternative 1, which relies on widening 10400/10600 South, 12300/12600 South and 11400 South impacts the most residential properties – 57.

Table 4 Comparison of Residential Relocations by Build Alternative				
	ALT 1	ALT 3A	ALT 4	ALT 7
Total Residential Relocations	57	35	33	33

Each property and the preliminary alternative under which it is impacted are listed in Table 5.

Table 5 Possible Residential Relocations Under Build Alternatives			
Site #	Address	Major Arterial/City	Alternatives Impacting Property
1	10419 S 3010 W	10600 South - South Jordan	1,3A
2	2730 W 10400 S	10600 South - South Jordan	1,3A
3	2617 W Cherry Park Ln	10600 South - South Jordan	1,3A
4	1954 W Gladys Cir	10600 South - South Jordan	1,3A,4,7
5	10418 S Tarali Ct	10600 South - South Jordan	1,3A,4,7
6	1530 W 10400 S	10600 South - South Jordan	1,3A,4,7
7	1508 W 10400 S	10600 South - South Jordan	1,3A,4,7
8	1502 W 10400 S	10600 South - South Jordan	1,3A,4,7
9	1494 W 10400 S	10600 South - South Jordan	1,3A,4,7
10	1486 W 10400 S	10600 South - South Jordan	1,3A,4,7
11	1476 W 10400 S	10600 South - South Jordan	1,3A,4,7
12	1450 W 10400 S	10600 South - South Jordan	1,3A,4,7
13	1432 W 10400 S	10600 South - South Jordan	1,3A,4,7
14	915 W 10550 S	10600 South - South Jordan	1,3A,4,7
18	665 W 11400 S	11400 South - Draper	1,4,7
19	637 W 11400 S	11400 South - Draper	1,4,7
20	633 W 11400 S	11400 South - Draper	1,4,7
23	589 W 11400 S	11400 South - Draper	1,4,7
24	11420 S 300 W	11400 South - Draper	1,4,7
25	175 W 11400 S	11400 South - Draper	1,4,7
26	@ I-15	11400 South - Draper	1,4,7
27	@ I-15	11400 South - Draper	1,4,7
28	@ I-15	11400 South - Draper	1,4,7
1	3210 W 11400 S	11400 South - South Jordan	1,4,7
2	3193 W 11400 S	11400 South - South Jordan	1,4,7
3	11384 S 2865 W	11400 South - South Jordan	1,4,7
4	11389 S 2865 W	11400 South - South Jordan	1,4,7
5	2800 W 11400 S	11400 South - South Jordan	1,4,7
6	2744 W 11400 S	11400 South - South Jordan	1,4,7
7	2541 W 11370 S	11400 South - South Jordan	1,4,7
8	11416 S Chapel Rim Wy	11400 South - South Jordan	1,4,7
10	11413 S Charter Pointe Rd	11400 South - South Jordan	1,4,7

Table 5 Possible Residential Relocations Under Build Alternatives			
Site #	Address	Major Arterial/City	Alternatives Impacting Property
12	1600 W 11400 S	11400 South - South Jordan	1,4,7
14	1465 W 11400 S	11400 South - South Jordan	1,4,7
15	11381 S 1300 W	11400 South - South Jordan	1,4,7
17	1163 W Annika Cir	11400 South - South Jordan	1,4,7
30	271 W 12300 S	12300 South - Draper	1,3A
21	883 W Stephens View Wy	12600 South - Draper	1,3A
22	877 W Stephens View Wy	12600 South - Draper	1,3A
23	863 W Stephens View Wy	12600 South - Draper	1,3A
24	857 W Stephens View Wy	12600 South - Draper	1,3A
25	843 W Stephens View Wy	12600 South - Draper	1,3A
26	837 W Stephens View Wy	12600 South - Draper	1,3A
27	833 W Stephens View Wy	12600 South - Draper	1,3A
28	12272 S Stephens View Cir	12600 South - Draper	1,3A
29	736 W 12300 S	12600 South - Draper	1,3A
1	3516 W 12600 S	12600 South - Riverton	1,3A
2	3492 W 12600 S	12600 South - Riverton	1,3A
3	3434 W 12600 S	12600 South - Riverton	1,3A
4	3410 W 12600 S	12600 South - Riverton	1,3A
5	3398 W 12600 S	12600 South - Riverton	1,3A
6	3396 W 12600 S	12600 South - Riverton	1,3A
7	12580 S Janice Dr	12600 South - Riverton	1,3A
8	12575 S Elm Meadows Rd	12600 South - Riverton	1,3A
9	3114 W Martinez Wy	12600 South - Riverton	1,3A
11	2595 W 12600 S	12600 South - Riverton	1,3A
18	1371 W 12600 S	12600 South - Riverton	1,3A

b) Residential Partial Takings

Issues surrounding residential partial takings surround the ongoing viability of the parcel as a residential use. The current landowner may be willing to put up with the inconvenience, noise or other disruptions caused by the proximity of the roadway and may feel that the compensation negotiated at the time of the taking was appropriate. The landowner may also be anticipating a future transformation of the land use to a commercial use. Unfortunately, in practice, this has not been the case as residential properties, particularly after a partial taking for a roadway expansion, do not have sufficient lot depth to support future commercial uses. As a result, the lots are left in a kind of noneconomic “limbo.” Therefore, we have evaluated the residential partial takings for two issues: first, the ongoing viability of the residential use by determining the distances from the residential structure to the edge of the ROW and second, the practicality of future conversion to commercial use based on lot depth.

Table 6 Summary of Residential Partial Takings by Corridor and Preliminary Build Alternative								
	Alternative 1		Alternative 3A		Alternative 4		Alternative 7	
Corridor	Sq.Ft.	#	Sq.Ft.	#	Sq.Ft.	#	Sq.Ft.	#
10600 South	221,116	111	221,116	111	80,438	29	80,438	29
11400 South	871,249	131	N/A	N/A	871,249	131	871,249	131
12600 South	311,017	129	311,017	129	N/A	N/A	N/A	N/A
Jordan Gateway	N/A	N/A	205,371	25	N/A	N/A	205,371	25
State Street	83,141	11	N/A	N/A	N/A	N/A	N/A	N/A
11800/11000 South	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	**1,486,523**	**382**	**737,504**	**265**	**951,687**	**160**	**1,157,058**	**185**

Table 7 Summary of Possible Future Commercial Conversions					
Corridor	Jordan Gateway	114th	Lone Peak	State Street	123rd
Future Conversions	0	0	27	51	24

c) Business Relocations

Under the alternatives, there are a potential of 17 businesses located at 14 locations that may be relocated under one or more of the alternatives. These businesses are listed, along with their addresses, below in Table 8. Two of the businesses, Beehive Credit Union and McDonalds – both located on the north side of the intersection of 10400 South and Redwood Road – would be relocated under any of the four build alternatives. There are 15 businesses that would be closed under alternatives 1 and 3A. All of these businesses are located along the 12300/12600 South corridor.

Table 8 Possible Business Relocations Under Preliminary Build Alternatives				
Site #	Address	City	Business Name	Alternatives Impacting Property
1	110th and I-15	South Jordan	Utah Water Sports	1,3A
10	2707 W 12600 S	Riverton	Maverick	1,3A
12	2522 W 12600 S	Riverton	Jordan Credit Union	1,3A
13	2364 W 12600 S	Riverton	Professional Building	1,3A
14	1804 W 12600 S	Riverton	Subway	1,3A
14	1804 W 12600 S	Riverton	Little Caesar	1,3A
15	2680 W 10400 S	South Jordan	Sinclair Gas Station	1,3A
15	1625 W 12600 S	Riverton	Jiffy Lube	1,3A
16	1605 W 12600 S	Riverton	H&R Block	1,3A

Table 8 Possible Business Relocations Under Preliminary Build Alternatives				
Site #	**Address**	**City**	**Business Name**	**Alternatives Impacting Property**
16	1605 W 12600 S	Riverton	Scrapbook Depot	1,3A
16	1605 W 12600 S	Riverton	Nail Jail & More	1,3A
16	10404 S Redwood Road	South Jordan	Beehive Credit Union	1,3A,4,7
17	1592 W 12600 S	Riverton	River Queen's Drive Inn	1,3A
17	10381 S Redwood Road	South Jordan	McDonald's	1,3A,4,7
19	1369 W 12600 S	Riverton	Mom's Floral & Gift	1,3A
20	1345 W 12600 S	Riverton	Riverton Family Dentistry	1,3A
31	2779 W 1600 S	Riverton	Cinder Block Building	1,3A
	11810 S State St	Draper	Commercial Listing	1,3A

If these businesses are relocated outside of the study area, the study area will lose roughly $5.7 million in annual gross sales (based on current estimated annual sales of about $2.9 million annually along 10600/10400/11000 South and $2.9 along 12300/12600 South), with an accompanying loss in annual local option tax revenues of around $29,000 in South Jordan and $29,000 in Riverton. Of course, many of these businesses could relocate within the study area, thus reducing the estimates of lost sales accordingly.[7]

In summary, Alternatives 1 and 3A will have the greatest impact in terms of business relocations.

Table 9 Summary of Preliminary Business Relocations				
	ALT 1	**ALT 3A**	**ALT 4**	**ALT 7**
Total Business Relocations	18	18	2	2

d) Business Partial Takings

Widening the road corridors will require taking commercial properties as outlined in Table 10.

Table 10 Summary of Partial Takings of Commercial Properties								
	Alternative 1		**Alternative 3A**		**Alternative 4**		**Alternative 7**	
Corridor	**Commercial**		**Commercial**		**Commercial**		**Commercial**	
	Sq.Ft.	**#**	**Sq.Ft.**	**#**	**Sq.Ft.)**	**#**	**Sq.Ft.**	**#**

[7] We cannot discuss these by alternative because two of the alternatives involve the relocations of only two businesses and nondisclosure requirements of sales information would not be able to be met.

Table 10 Summary of Partial Takings of Commercial Properties								
	Alternative 1		Alternative 3A		Alternative 4		Alternative 7	
Corridor	**Commercial**		**Commercial**		**Commercial**		**Commercial**	
	Sq.Ft.	**#**	**Sq.Ft.**	**#**	**Sq.Ft.)**	**#**	**Sq.Ft.**	**#**
10600 South	185,773	64	185,773	64	162,789	53	162,789	53
11400 South	91,488	14	N/A	N/A	91,488	14	91,488	14
12600 South	125199	53	125199	53	N/A	N/A	N/A	N/A
Jordan Gateway	N/A	N/A	446263	26	N/A	N/A	446263	26
State Street	102690	32	N/A	N/A	N/A	N/A	N/A	N/A
11800/11000 South	130057	4	130057	4	N/A	N/A	N/A	N/A
Total	**635207**	**167**	**887292**	**147**	**254276**	**67**	**700539**	**93**

Partial takings of commercial properties have different issues than do partial takings of residential properties. Businesses are not as sensitive to proximity to the public ROW as are residential properties. However, partial takings often mean takings of valuable parking stalls which can be quite disruptive to a business' operations. The following table shows the number of properties with parking stalls that will be impacted by corridor.

Table 11 Summary of Parking Stall Takings											
10400/10600 South			**Lone Peak**			**State Street**			**12300/12600 South**		
# Taken	Avail-able	% Taken	# Taken	Avail-able	% Taken	# Taken	Avail-able	% Taken	# Taken	Avail-able	% Taken
2	106	2%	2	25	8%	42	124	34%	14	163	9%
2	167	1%	32	86	37%	37	90	41%	78	140	56%
112	660	17%	29	57	51%	16	147	11%	43	217	20%
35	221	16%				12	21	57%			
38	234	16%									
46	257	18%									
146	283	52%									
35	233	15%									
48	443	11%									
14	163	9%									
37	500	7%									
66	500	13%									
581	**3767**		**63**	**168**		**107**	**382**		**135**	**520**	

There are twelve commercial parcels along the 10400/10600 South corridor that will lose parking stalls as a result of partial takings. Of these, four will lose less than 10 percent of their stalls, seven will lose between ten and 15 percent of their total stalls and one parcel will lose more than half of its parking. This is a substantial impact to this business' operation and may impact its ability to operate. We are assuming that all of these impacts are felt under all of the alternatives.

Lone Peak is widened under Alternatives 3A and 7. Three commercial parcels will lose parking with partial takings, two of which losing a substantial portion.

State Street widening occurs under Alternative 1 and will take parking stalls from four commercial parcels, removing large portions from three of these parcels.

The widening of 12300/12600 South will take place under Alternatives 1 and 3A and will result in lost parking from three parcels, two with significant losses.

e) Other Business Impacts

We have not yet discussed the potential impacts on businesses that do not have the ability to sustain operations through the temporary reduction in sales during construction. These businesses are not included in the list above. Without specifically identifying these businesses, it is possible that there are a few, smaller businesses that will not survive the anticipated reduction in sales during construction and that these stores will be forced to close their doors or to relocate.

Long-term impacts can also be positive, as evidenced by better traffic flow, higher traffic counts, easier access and increased sales.

Access to businesses after the construction period is extremely important to existing business owners.

D. Indirect Impacts

According to the projected AADT and Level of Service ("LOS") data in Table 12, in the No Action Alternative, congestion along I-15 and at the interchanges at 10600 South and 12300 South would continue to increase. As the congestion increases, people will seek alternative routes to avoid the area. As a result of the congestion, business would slow and the economy of the area would be somewhat negatively impacted.

Improved traffic flow in the area will increase the visibility of businesses to a larger market. Research indicates that many businesses report positive impacts upon completion of road widening projects in their respective areas. For example, after the widening of Interstate 77 near Fort Mill and Rock Hill in York County, South Carolina, the county experienced "explosive growth" which "offers the benefits of a strong housing market, new jobs and more amenities like restaurants and shopping."[8] In Chesterfield County, Virginia, gross retail sales grew by ten percent in one year after the widening of Highway 151.[9]

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[8] Herald Online, "Penny Sales-Tax Supporters Tout Benefits of Renewing Program, Debate Which Projects to Include," May 30, 2003.
[9] Morning News Online, "Chesterfield County Bucks the Economic Trend," May 25, 2003.

In some instances, property values have also been known to increase after road-widening projects.[10] While this may benefit existing property owners, it may also limit smaller or startup businesses from locating in the area. Because this area is already largely commercial in nature, and will not experience any significant changes in land use from the construction activities, property value impacts, other than along 11400 South near I-15, will be minimal in this case. Note that property values on 400 South in Salt Lake City have not been impacted by the LRT and road widening construction.

Table 12 indicates, in general, how each alternative will impact new and existing development based on projected changes in LOS and AADT counts. It is assumed the the market has adapted to current traffic conditions, so that if there is existing traffic conjestion in an area, that is reflected in the existing market demand for goods, services and ulimately real estate. Therefore, where the level of service is projected to remain at about the same level, we've anticipated a neutral impact to existing businesses and future development, unless there is a projected decline in AADTs for the the area; then we are p-rojecting a negative impact. Correspondingly, if the LOS is projected to improve, but the AADTs are anticipated to remain level or to fall, we are again proijecteing a neutral impact.[11] Where AADTs are pr0ojected to decline significanlty, or LOS is projected to drop for a reasonable level to failure, we anticipate negative impacts to businesses.

Table 12
Comparison of Projected LOS and AADT at Major Intersections by Alternative

	Alternative								
Critical Intersection	**No Build**	**1**	**Δ in AADT**	**3A**	**Δ in AADT**	**4**	**Δ in AADT**	**7**	**Δ in AADT**
10600 / Redwood	E	E	▲	E	▲	D	±	D	±
10600 / 1300	F	E	±	F	▲	E	▼	E	▼
10600 / Jordan	F	E	▲	D	▲	D	±	E	▼
10600 / Auto Mall	C	D	±	D	±	D	▼	D	▼
10600 / State	F	E	±	E	±	E	▼	E	▼
11400/Redwood	C	D	▲	D	±	D	▲▲	D	▲▲
11800 / Redwood	C	D	▼	D	±	D	▼	D	▼
11400/1300 West	E	D	▲▲ ▲	B	±	C	▲▲ ▲	C	▲▲ ▲
11800 / 1300	E	D	▼	B	▼	C	▼	C	▼
11400 / Jordan	C	D	▲▲	E	▲	D	▲▲ ▲	D	▲▲ ▲
11400 / State	F	D	▲	D	±	F	▲	E	▲
12300 / Redwood	E	D	▼	D	±	D	▼	D	▼
12300 / 1300	D	D	±	D	▲	D	▼	D	▼
12300 / Lone Peak	C	D	±	E	▲	D	▼	E	▼
12300 / State	D	D	±	D	▲	D	▼	D	▼

[10] Boone Area Chamber of Commerce, "Northwest N.C. Expecting Major Transfusion From a Four-Lane 421.
[11] The same visibility for the businesses will occur, just with better transportation service.

Table 12
Comparison of Projected LOS and AADT at Major Intersections by Alternative

	Alternative								
+50% and more	▲▲▲								
+31% to +50%	▲▲								
+6% to +30%	▲								
+5% to -5%	±								
-6% to -30%	▼								
-31% to -50%	▼▼								
-50% and less	▼▼▼								

Table 13
Summary of Impacts to Existing and New Development At Critical Intersections

	Impact to Existing Businesses					Impact to New Development			
Critical Intersection	**1**	**3A**	**4**	**7**	Est. % Developed	**1**	**3A**	**4**	**7**
10600 / Redwood	±	±	±	±	75%	±	±	±	±
10600 / 1300	±	±	±	±	75%	±	±	±	±
10600 / Jordan	±	▲	±	±	25%	±	±	±	±
10600 / Auto Mall	±	±	▼	▼	100%	NA	NA	NA	NA
10600 / State	±	±	±	±	100%	NA	NA	NA	NA
11400/Redwood	±	±	±	±	25%	±	±	±	±
11800 / Redwood	▼	±	▼	±	40%	▼	±	▼	±
11400/1300 West	▲	±	▲	▲	40%	▲	±	▲	▲
11800 / 1300	±	±	±	±	5%	±	±	±	±
11400 / Jordan	±	±	±	±	5%	±	▼	±	±
11400 / State	▲	±	±	±	60%	▲	±	±	±
12300 / Redwood	±	±	±	±	60%	±	±	±	±
12300 / 1300	±	±	±	±	70%	±	±	±	±
12300 / Lone Peak	±	±	▼	▼	60%	±	▼	▼	▼
12300 / State	±	±	±	±	100%	NA	NA	NA	NA

1. Housing Development

Most of the housing growth in the Salt Lake Valley is projected to occur within the southern part of the valley (with the exception of the northwest section of Salt Lake City). Because of the increasing scarcity of land in the Salt Lake County and its central location along the populous Wasatch Front, housing development will occur in the undeveloped areas of the study area under any of the five alternatives under consideration. The following table outlines the projected number of households in each of the four communities and the growth projected through 2030.

Table 14 Projected Number of Households by City and Study Area 2004,2010,2020 and 2030				
	2004	**2010**	**2020**	**2030**
Draper	8,653	11,932	14,121	15,927
w/in Study Area	1,751	2,371	2,844	3,110
% w/in Study Area	20%	20%	20%	20%
Average Annual Growth Rate -- City		5.5%	1.7%	1.2%
Average Annual Growth Rate w/in Study Area		5.2%	1.8%	0.9%
Riverton	8,411	14,295	16,709	17,679
w/in Study Area	3,330	4,797	5,050	5,372
% w/in Study Area	40%	34%	30%	30%
Average Annual Growth Rate -- City		9.2%	1.6%	0.6%
Average Annual Growth Rate w/in Study Area		6.3%	0.5%	0.6%
Sandy	28,434	32,697	37,397	39,513
w/in Study Area	2,401	2,736	3,126	3,334
% w/in Study Area	8%	8%	8%	8%
Average Annual Growth Rate -- City		2.4%	1.4%	0.6%
Average Annual Growth Rate w/in Study Area		2.2%	1.3%	0.6%
South Jordan	8,709	13,031	20,998	29,138
w/in Study Area	3,000	3,867	4,375	6,221
% w/in Study Area	34%	30%	21%	21%
Average Annual Growth Rate -- City		6.9%	4.9%	3.3%
Average Annual Growth Rate w/in Study Area		4.3%	1.2%	3.6%
Source: Wasatch Front Regional Council				

In general, household growth within the study area is projected to trail that outside the study area for each of the communities.

2. Retail Development

a) Local/Neighborhood

There is sufficient population at the present time to warrant an additional neighborhood scale retail development at 11400 South and Redwood Road, if access were to be improved as would occur under alternatives 1, 4 and 7. Under the No Action Alternative and Alternative 3A, this demand would be met at community or regional scale developments along the Bangerter Highway. A development of this kind would be roughly 10 acres in size with roughly 50,000 square feet of retail space. This amount of space would produce about $10 million in gross sales annually and roughly $100,000 in local option sales tax to the City of South Jordan. It is possible that this retail center could draw some demand from the existing neighborhood centers at 10400 South and 12300 South and Redwood Roads, or that it would not capture the full amount estimated, but these figures represent typical numbers generated by such a center with the amount of population in its trade area, and our analysis suggests that the trade area of all three areas can support just over three such centers.

b) Regional

The area that will be affected by increased demand for regional retail is the area near I-15 at 11400 South. This is the only area within the study area that will gain from improved access ***with regional exposure*** under any of the build alternatives. These areas are illustrated in Figure 1.

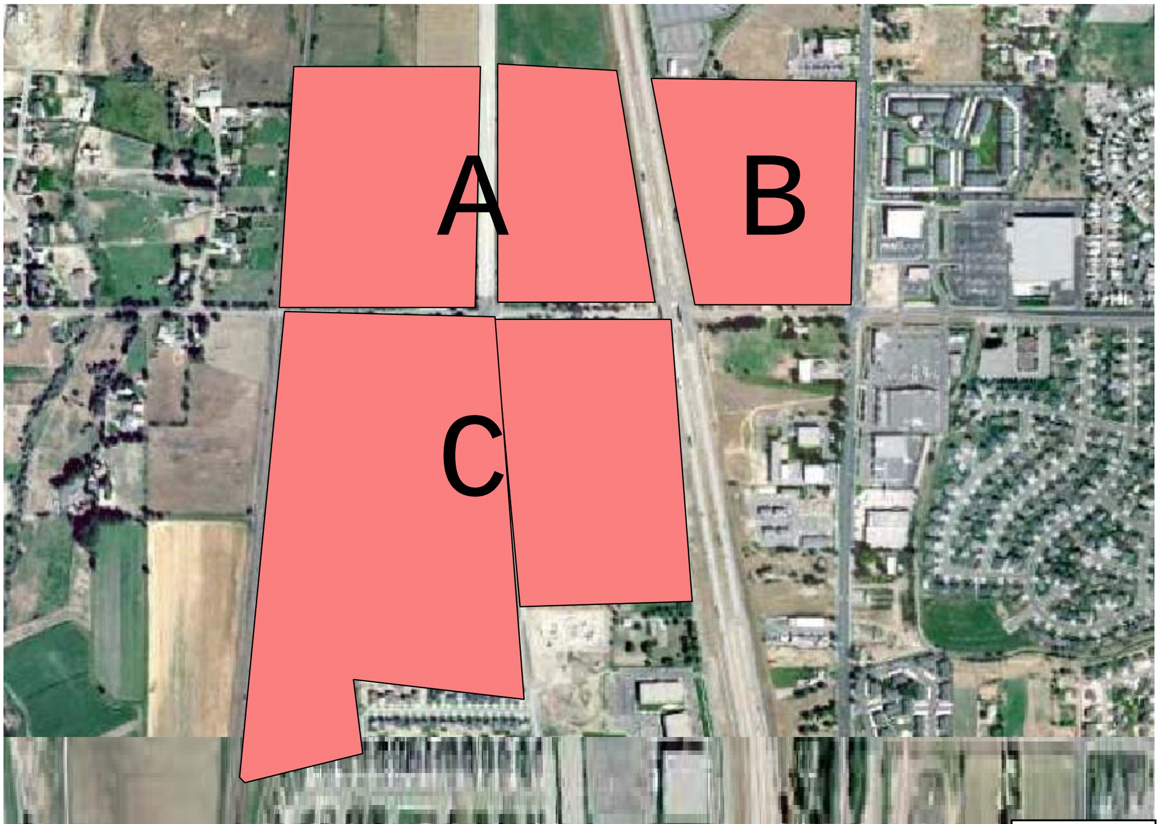

Figure 1

The consultants have estimated the amount of acreage that will be converted into regional retail development, the amount of retail development, the estimated amount of sales and the corresponding amount of sales tax generated to the local jurisdiction under each of the alternatives. These figures are provided in Table 15.

Table 15
Regional Commercial Acreage/Development Analysis

Area	No Build	Alt 1	Alt 3A	Alt 4	Alt 7
A	0	32	0	32	32
B	0	29	0	25	29
C	0	76	0	72	71
Total	0	137	0	129	132
Floor Area Ratio[12]	NA	0.14	NA	0.24	0.14
Est SF South Jordan	0	200,000	-	332,000	200,000
Est SF Sandy	0	181,000	-	259,000	181,000

[12] Floor Area Ratio indicates the amount of development that occurs on a site. It is the ratio of total space in a structure (the floor area) to the total land area (expressed in square feet).

Table 15 Regional Commercial Acreage/Development Analysis					
Area	**No Build**	**Alt 1**	**Alt 3A**	**Alt 4**	**Alt 7**
Est SF Draper	0	475,000	-	747,000	444,000
Est Total Regional Retail SF	0	856,000	-	1,338,000	825,000
Sales/SF	$350	$350	$350	$350	$350
SJC	$0	$70,000,000	$0	$116,200,000	$70,000,000
Sandy	$0	$63,350,000	$0	$90,650,000	$63,350,000
Draper	$0	$166,250,000	$0	$261,450,000	$155,400,000
Total	$0	$299,600,000	$0	$468,300,000	$288,750,000
Local Option Sales Tax					
SJC	$0	$700,000	$0	$1,162,000	$700,000
Sandy	$0	$633,500	$0	$906,500	$633,500
Draper	$0	$1,662,500	$0	$2,614,500	$1,554,000
Total	$0	$2,996,000	$0	$4,683,000	$2,887,500

The amount of retail space differs in the various alternatives based on three factors: (1) access along 114^{th} South; (2) the amount of land available for development (as impacted by the amount of ROW needed for the various alternatives); and the intensity of the development. If there is regional exposure, there will be a certain level of development intensity (expressed by a floor area ratio of 0.14); if there is regional exposure and regional access, the development intensity increases to a floor area ratio of about 0.24. This increases developed square feet, gross sales and local option sales tax by about 50 percent for Alternative 4 over Alternatives 1 and 7.

3. Office

Office development is planned as indicated on the maps in the Economic Development sections of Chapters 1 and 3 and are generally described as follows:

- In South Jordan, along the Jordan River bottom area both north and south of 10600 South and in the Daybreak mixed-use development;
- In Riverton, along the Bangerter Highway near the Intel campus; and
- In Sandy and Draper, there is no future office development planned in the study area.

The only potential impact would be felt along the 10600 corridor in South Jordan over a period of one construction season of roughly six months. Over the course of the timeframe of this analysis, we are assuming that the impact to overall office development in the area is relatively minor.

4. Industrial

The only traditional industrial development is located in Draper City, just west of I-15 and south of 12300 South. This area is nearly completely developed, or soon to be completed. The current reconstruction of the 12300 South interchange will impact this industrial area and its distribution uses than will any of the proposed alternatives, none of which indicate relocations of commercial uses along 12300 South

E. Induced Impacts

Induced impacts are calculated using the Utah Population, Economic and Demographic Model that measures the impact on the ***regional*** economy of new investment in the region. In this analysis, the new investment is assumed to be the federal portion of the total project costs (estimated at 13 percent of total projected costs for each alternative).[13] Induced impacts do not include any of the direct or indirect impacts described above. For example, none of the induced employment impacts occur within the heavy construction trades, whereas all of the direct employment impacts are felt within the heavy construction industry. Put another way, these are the economic impacts felt throughout all industries in the region by virtue of a general expansion of the economy based on a one-time infusion of additional capital into the area.

Table 16 summarizes the amount of federal spending assumed with each of the alternatives and the associated induced employment and earnings associated with each.

Table 16
Induced Impacts Associated with Each Alternative

Alternative	Total Project Cost	Total Federal Investment	Employment	Earnings
No Action	0	0	0	0
Alt 1	$235,000,000	$30,550,000	965	$15,897,770
Alt 3a	$165,000,000	$21,450,000	677	$11,162,264
Alt 4	$145,000,000	$18,850,000	595	$9,809,262
Alt 7	$155,000,000	$20,150,000	636	$10,485,763

Induced impacts estimated using the UPED model developed by the Utah Governor's Office of Planning and Budget.

Fiscal Impacts

Table 17
Summary of Fiscal Impacts to Study Area for Build Alternatives

	Alt 1	Alt 3A	Alt 4	Alt 7
South Jordan City				
Local Option Sales Tax Neighborhood Retail	$100,000		$100,000	$100,000
Local Option Sales Tax Regional Retail	$700,000	$0	$1,162,000	$700,000
Total	$742,000	-$58,000	$1,262,000	$800,000
Sandy City				
Local Option Sales Tax Regional Retail	$633,500	$0	$906,500	$633,500
Draper City				
Local Option Sales Tax Regional Retail	$1,662,500	$0	$2,614,500	$1,554,000
Riverton City				
Local Option Sales Tax Loss Business Disruption	-$58,000	-$58,000		
Study Area				
Local Option Sales Tax Construction Worker Spending	$2,269	$1,593	$1,400	$1,497
State of Utah				
Income Tax	$7,361,083	$5,168,420	$4,541,945	$4,855,182
Total	$10,343,352	$5,054,013	$9,326,345	$7,844,179

[13] Per UDOT.